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ABSTRACT

The current pressures of reduced government funding, lower enrollments, and greater scrutiny by governing boards require institutions of higher education to redesign processes and systems to survive. Despite resistance to Total Quality Management (TQM) in academia, it can provide the tools to implement systemic change and quality improvement. Continuous improvement is not an event or a program, but a process predicated on a long-term organizational commitment to fundamental change and requiring a high level of commitment and strong leadership. Essential tools in implementing a change process include Deming's Plan-Do-Check-Act cycle, which provides a road map for identifying potential areas of improvement, pilot-testing remedies, evaluating effects, and institutionalizing the changes. Other tools include the use of control charts, scatter diagrams, and new management plans and practices to map existing processes, identify areas for action, set priorities, measure results, and determine directions for future improvement. Finally, key elements that can help ensure success include maintaining a focus on customers, primarily students, and maintaining leadership to guide and sustain the endeavor. Contains 11 references. (BCY)

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# *A PRACTICAL APPROACH TO IDENTIFY AND SOLVE PROBLEMS:*

# *CONTINUOUS IMPROVEMENT STRATEGIES*

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# A Practical Approach to Identify and Solve Problems: Continuous Improvement Strategies

by Andrew A. Rezin, Robert L. Queen and Michael L. Burgess

**The Problem**

The current pressures of reduced government funding, lower enrollments, and greater scrutiny by governing boards require that we redesign our processes, our very institutions, in order to survive. " The goal, of course, is to do more with less." (Cross,1993) In order to achieve this we must look at new approaches to managing our endeavors. This environment requires that we use all the tools at our disposal in order to respond to the challenges. We must not only commit to change the way we do business but to create a new work environment. This environment must embrace the need for constant evolution and constant improvement. This is essential if we are to meet the increasing demands of our customers and constituents. As David T. Kearns, former chairman of Xerox and former Secretary of the U.S.Dept. of Education so aptly states "Quality is an important part of the *process* of managing such institutional change." (Siegel,1994)

All educators can relate to the relentless pressure from administration to constantly improve, remain competitive, and increase our enrollments in spite of nationwide trends of decline. Yet, with this persistent pressure to continuously improve there remains a high resistance in many institutions to implementing Total Quality Management (TQM). TQM is viewed as a cult, a 'quick fix', an industrial model to improve assembly lines. It surely has no application in academia.

Most authorities have admonished us that the first requirement for implementing TQM is top management commitment. "Management commitment is key to the success of TQM. Top management must understand, commit to, and provide long-term leadership." (LeTarte,1994) This has restrained many institutions from even initiating an effort. Is top management commitment a prerequisite?

The champion of TQM at Columbus State (Dean of Engineering Technologies, Dr. Mike Burgess) obtained permission to have a small group of faculty and staff from his division enroll in a Quality Transformation course offered during Summer Quarter 1994. The purpose was to learn to use the tools that could be used to help us achieve our goals. This seemingly insignificant effort has yielded results far exceeding any expectations.

This initial effort of twenty people investing five hours per week over a three month period yielded the following results:

- Development of a marketing plan to promote a program with low enrollments resulting in a 200%+ increase in enrollment.
- Recommendations for revision in the student application and enrollment process dramatically reducing the number of steps required for a student to apply and be enrolled at the institution.
- Development and implementation of a student survey to evaluate course offering times to assure correlation with student needs and preferences.

In spite of the substantial results of these accomplishments they pale in comparison to the institutional impact. This effort has led to a dramatic change in the administration's position about continuous improvement:

- A Continuous Quality Improvement (CQI) seminar was scheduled with required attendance from all college management and administrators
- The goals and objectives of the new college strategic plan were required to include measurable and definable goals along with specific deadlines for completion.
- The strategic plan was published including an introductory section in which the college president made his first public commitment of the institution to a continuous quality improvement strategy.
- Two campus-wide cross-functional teams have been recruited to look at student recruitment and intake processes with a charge to complete their mission in 60 days.
- The president has committed to additional cross-functional teams to evaluate other institutional issues.

I see our experience as a ray of hope. All can agree on a desire to continuously improve. All can draw upon the proper tools and techniques that will best serve our efforts. "The issue, then, is less TQM itself than the appropriateness of the set of ideas behind it to problems we know we face."(Marchese,1993)

**Instituting Change**

The prerequisites for implementing systemic change are the knowledge and skills of the change process, the tools to implement them *and* leadership to spearhead and sustain the effort. Continuous improvement cannot occur lacking the tools or the leadership. It is through this two-pronged approach that we can develop and sustain change efforts over the long haul.

**Continuous Quality Improvement**

Quality improvement is not an event, a program or a goal. We are admonished to "beware of programs. By definition, programs end. Performance improvement, by contrast, should never end." (Rummler & Brache,1990) Quality improvement is a process predicated on a long-term organizational commitment to fundamental change. This change requires a high level of commitment and strong direction to stay the course. This change process is different from anything previously

attempted in traditional education. "TQM begins and ends with 'the customer.' Customers define quality." (Siegel, 1994) The process promotes process stabilization, improvement and innovation.

In order to promote stability we must recognize that organizations are basically a network of human relations. It is important for a manager to accept and understand that people are self-motivated. They have a desire to work in an organizational system that contains respect and where the value of the individual is appreciated. We must understand that organizational development is a process and not a goal. Therefore, the level of commitment to action must be firmly rooted in all employees in order to maintain constancy of purpose. Establishing commitment requires the clear communication of the goals and objectives of management to assure a common understanding of all employees. Finally, they must be able to visualize the benefits that the change processes will bring *to them* and the organization as a whole. Improvement and innovation can only occur in a 'fear free' environment (Deming,1982) The reinforcement and assurance that taking risks is not only accepted, but expected is essential. Taking risk is critical to mobilize the masses to action.

**The Essential Tools**

"If organizations and their people want to change behavior, they often need training on new ways to behave.....Leaders cannot just say to their people, 'Poof, you're empowered: now act differently.'" (Siegel,1994) Employees must be trained and given a broad selection of new tools from which to draw in order to initiate and sustain this effort.

The Deming PDCA (Plan-Do-Check-Act) cycle (Deming,1982) is the fundamental building block upon which the change process is anchored. The PDCA cycle is often called the cycle of learning. This tool provides a systematic roadmap to follow in identifying potential areas of improvement, pilot-testing potential remedies, evaluating the effects, and institutionalizing the changes. The process is better defined as a spiral than a cycle. Its intent is to work through the process time and again to make continuous improvements. Utilizing this model, people benefit through learning continuously, sharing their learning throughout the system and thereby improving themselves and the organization as a whole. A variety of practical tools are essential to our ability to effectively carry out the PDCA cycle. "These consist of the 'old tools' of TQM (e.g., control charts, Pareto charts, fish bone diagrams, run charts, histograms, scatter diagrams, and flow charts and the 'new' tools (management policies, management plans, management programs and management practices." (Sashkin, 1993) They are, however, just tools. As is true of any tool, they are only valuable when in the hands of a skilled practitioner and used in the right situation. These tools assist in:

- Mapping existing processes
- Identifying potential areas for improvement

- Helping to prioritize actions
- Measure results
- Evaluate successes and/or failures
- Project directions for further improvement

**Customer Focus**

A key obstacle to improvement is found in a lack of proper focus. The proper measure of success is in the eyes of the customer. "The cardinal rule is to identify explicitly who your customers are, know their needs systematically, and commit to serving those needs." (Marchese,1991) In order to have maximum impact all efforts should be directed toward and measured by customer satisfaction.

Who are our 'real' customers? Patricia Cross answers this in noting that " higher education, of course, has many customers, but first and foremost is the student." (Cross,1993) The importance in changing our perspective from an internal focus to that of viewing success through the eyes of our customers (students) cannot be overemphasized. We must direct all of our efforts to identify and satisfy these needs if we are to succeed.

**The Need for Leadership**

"The failure of the leader to lead is one of the chief causes of failure in TQM implementation." (Thor, 1994) Leadership is a very complex concept that has been defined from a variety of aspects. One of the most comprehensive attempts at defining leadership was produced by R.M. Stogdill. He defines it as "the process (act) of influencing the activities of an organized group in its efforts toward goal setting and goal achievement."(Bass, 1990) This definition, although brief, contains some essential fundamentals. First, leadership only occurs in groups. It is not an isolated activity. Second, there is a clear distinction between the methods of mandating action found in traditional management to that portrayed here as 'influencing' others. Finally, there is a distinct orientation towards action in a specific direction.

Change requires leadership to direct, support and sustain the endeavor. Leadership is an action. Leaders, much like any managers must possess personality traits and attributes that make others look to them for guidance. However, the biggest distinction occurs in the 'living example' that leaders demonstrate daily.

One person can make a difference. The embodiment of the leadership skills noted above in one dean, Dr. Michael Burgess, and his unrelenting commitment to CQI has acted as catalyst for institutional change. In addition to the major policy changes noted earlier cross-functional teams have become the rule rather than the exception on our campus. Whether a department is merely looking for input or working to resolve a complex institutional dilemma, teams are being utilized.

They range from single meeting focus groups to longer term teams committed to resolving major issues.

**Summary:**

Systemic change is needed in academia in order to survive in these turbulent times. Increased accountability and the advent of performance based funding will have dramatic impact on our future. The implementation of continuous improvement strategies and the leadership to promote and exemplify them daily are the fundamental tools that will separate the winners from the losers.

The implementation plan, as every other action in TQM, can best be implemented by following these four simple steps:

- Plan: Gain a commitment to enact continuous improvement and train the interested parties in the tools and techniques of TQM.
- Do: Use the tools to identify a problem and determine a course of action. Small scale implementation is recommended as a start.
- Check: Evaluate the results of course of action.
- Act: If the results meet the intended result integrate them as a permanent part of the organization. If not, return to the planning stage and re-evaluate what went wrong.

The potential positive impact on the entire organization is astonishing. We have seen this wave of change engulf the business community over the past twenty years. We are currently experiencing the dramatic positive impact that can occur in our academic institution. "TQM... CQI... whatever the preferred spelling, our future depends on initiating and using change to improve our environments." (Porter, 1995)

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